ART. VIII.—Experience of the Barque "W. H. Besse" in the Java Earthquake, August, 1883.

BY MR. G. H. RIDGE.

[Read 12th June, 1884.]

SOME days ago Captain Gibbs, of the American barque "W. H. Besse," spoke to me of his experience in the Java earthquake (he being at that time chief officer). The vessel was on a voyage from Manila to Boston. I thought that any information I could obtain of such a terrible disaster would be of interest to the members of the Royal Society, and I requested permission to look at the chart and make extracts from the log-book, which was readily granted. On looking at the chart of Sunda Straits, although they had only been partially re-surveyed at the time the "W. H. Besse" left Boston for Melbourne, I found that a large portion of Krakatoa Island had been submerged; two new islands and a large reef have appeared where deep water was previously indicated. During the time of the earthquake the shower of ashes was so heavy that they covered the deck to a depth of five or six inches, and the darkness so intense it was almost impossible to distinguish an object a few inches distant. The day following the crew were engaged most of the day in throwing the ashes overboard. The captain filled a small cask out of those that had fallen on the sails. The present chief officer, not knowing that the captain desired to bring them to Melbourne to distribute amongst his friends, used most of them when scrubbing paint-work. However, I am pleased to say I obtained a small quantity and handed them to our worthy president for microscopical examination and analysis. I shall now proceed to read the extracts taken from the log-book :---

Friday, 24th August.

"Off Amsterdam Island. Moderate winds and cloudy weather; barometer 30.14, thermometer 95."

Saturday, 25th August.

"Moderate winds and fine weather; barometer 30.15, thermometer 90."

Sunday, 26th August.

"The day commenced with strong breezes and thick, cloudy weather, barometer 30.15. At 4 a.m. hove short, and at 6 a.m. got under weigh, wind south-west. At 4 p.m., wind hauling ahead, came to an anchor, the sky at this time having a threatening appearance, atmosphere very close and At 5 p.m. heard a quick succession of heavy reports smoky. sounding like a broadside of a man-of-war, only far louder and heavier; heard these reports at intervals throughout the The sky was intensely dark, the wind having a dull night. moaning sound through the rigging; also noticed a light fall The sun, when it rose the next morning (Monday, of ashes. 27th August), had the appearance of a ball of fire, the air so smoky could see but a short distance. At 6 a.m., thinking the worst of the eruption was over (as the reports were not so frequent or heavy as during the night), got under weigh. Having a fair wind, was in hopes to get out clear of the Straits before night. At 10 a.m. were within 6 miles of St. Nicholas Point, when we heard some terrific reports; also observed a heavy black bank rising up from the direction of Krakatoa Island. The barometer fell an inch at once, suddenly rising and falling an inch at a time. Called all hands, furled all sail securely, which was scarcely done before the squall struck the ship with terrific force. Let go port anchor and all the chain in the locker; wind increasing to a hurricane. Let go starboard anchor. It had gradually been growing dark since 9 a.m.; by the time the squall struck us it was darker than any night I ever saw-this was 12 o'clock noon. A heavy shower of ashes came with the squall, the air being so thick it was difficult to breathe; also noticed a strong smell of sulphur—all hands expecting to be suffocated—the terrible noises from the volcano, the sky filled with forked lightning running in all directions, making the darkness more intense than ever. The howling of the wind through the rigging formed one of the wildest and most awful scenes imaginable-one that will never be forgotten by anyone on board-all expecting that the last day of the earth had come. The water at this time was running by us

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in the direction of the volcano at the rate of twelve miles an hour. At 4 p.m. wind moderating, the explosions had nearly ceased, the shower of ashes was not so heavy, so was enabled to see our way round the decks. The ship was covered with tons of fine ashes resembling pumice-stone. It stuck to the sails, rigging, and masts like glue, so it was weeks before it was removed, some of it still remaining on the wire backstays. One seaman was severely injured by walking off the forward house; he died the day after the ship's arrival in Boston. All day Tuesday, 28th August, crew were employed in shovelling the ashes off the decks, clearing the cables, and heaving up one anchor. Wednesday afternoon, 29th August, got under weigh. Was abreast of Anger at 8 in the evening; saw no lights on shore or signs of life. Although a fair wind, furled all sail but topsails. Kept on our course slowly, and cautiously heaving the lead every few minutes. At daylight the Straits were covered with trees, so it was difficult finding a passage through them. Passed a large number of dead bodies and fish, and thousands of green cocoanuts. At 6 p.m. were outside of the Straits. The ocean for 600 miles was covered with ashes and lava, the water for 1000 miles having a dull grey colour. Five of the crew were taken sick with the Java fever the day after leaving the Straits. Buried one man at sea. After rounding the Cape experienced a very heavy gale in the Gulf and bad weather on the coast, with only five men to work the ship, and those completely laid up by the time we got a pilot on board off Highland Light, one seaman dying the day after we arrived, and several more going to the Hospital."